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Dr. Tom Michalski
Core Library
U.S. Dept. of the Interior
Geological Survey
Ms 975
Box 25046, Federal Center
Denver, Colorado 80225

Dear Dr. Michalski, Septmeber 14, 1987

I have completed the organic carbon, and inorganic (i.e. skeletal) phosphate concentration measurements on the cores which I sampled at the USGS Core Library in late June. Those results are reported here. I am still working on the XRD determinations and expect to have them completed by October.

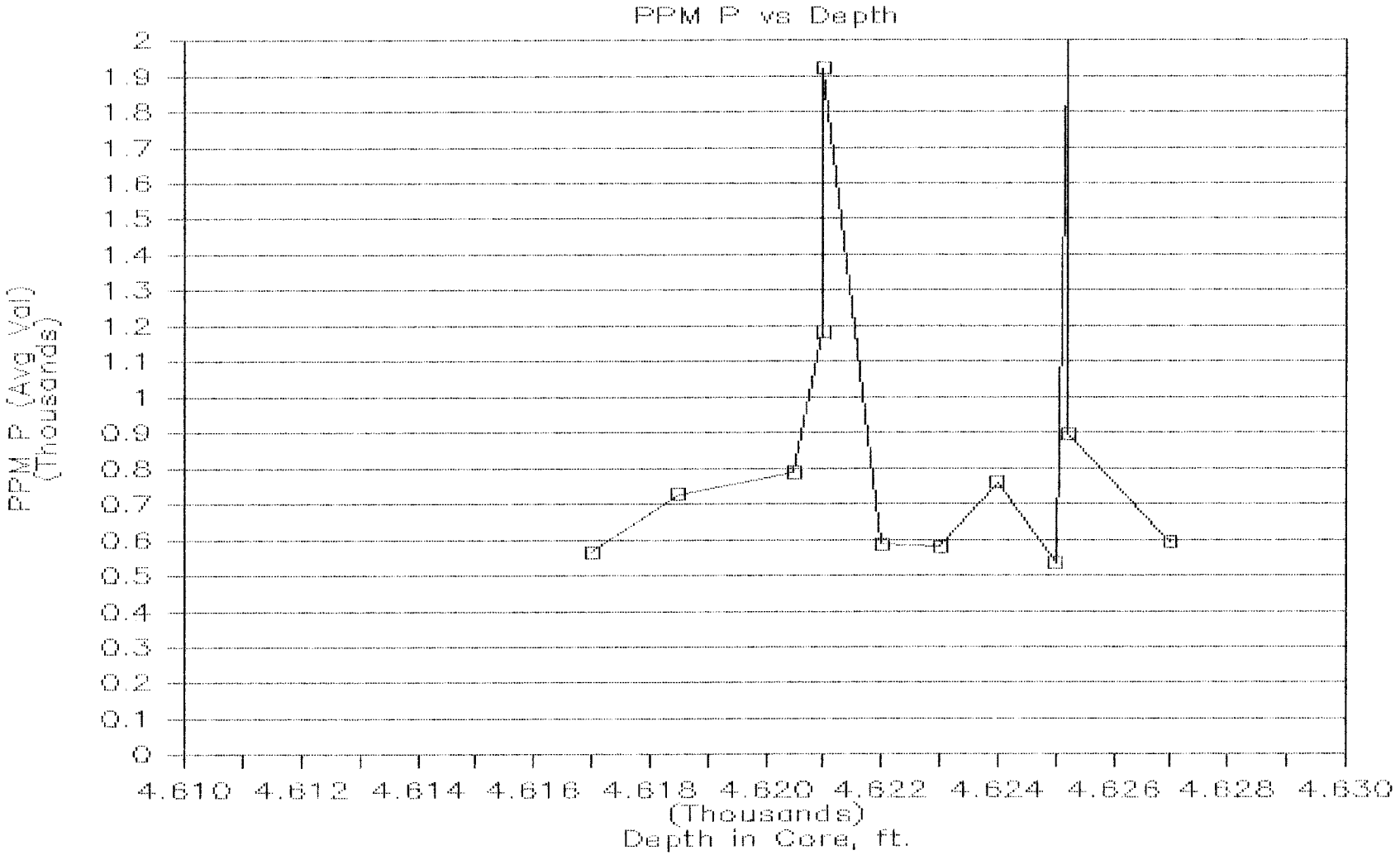
Several of the samples were subdivided into silty or sandy ("Sd" or "D") and shaley ("Sh" or "H") lithologies; or upper ("U") and lower ("L") subsamples of the chip if there appeared to be a change in bioturbation, cementation, or sedimentary structures. Samples marked with a "(B)" preceding the sample name and number are bentonites.

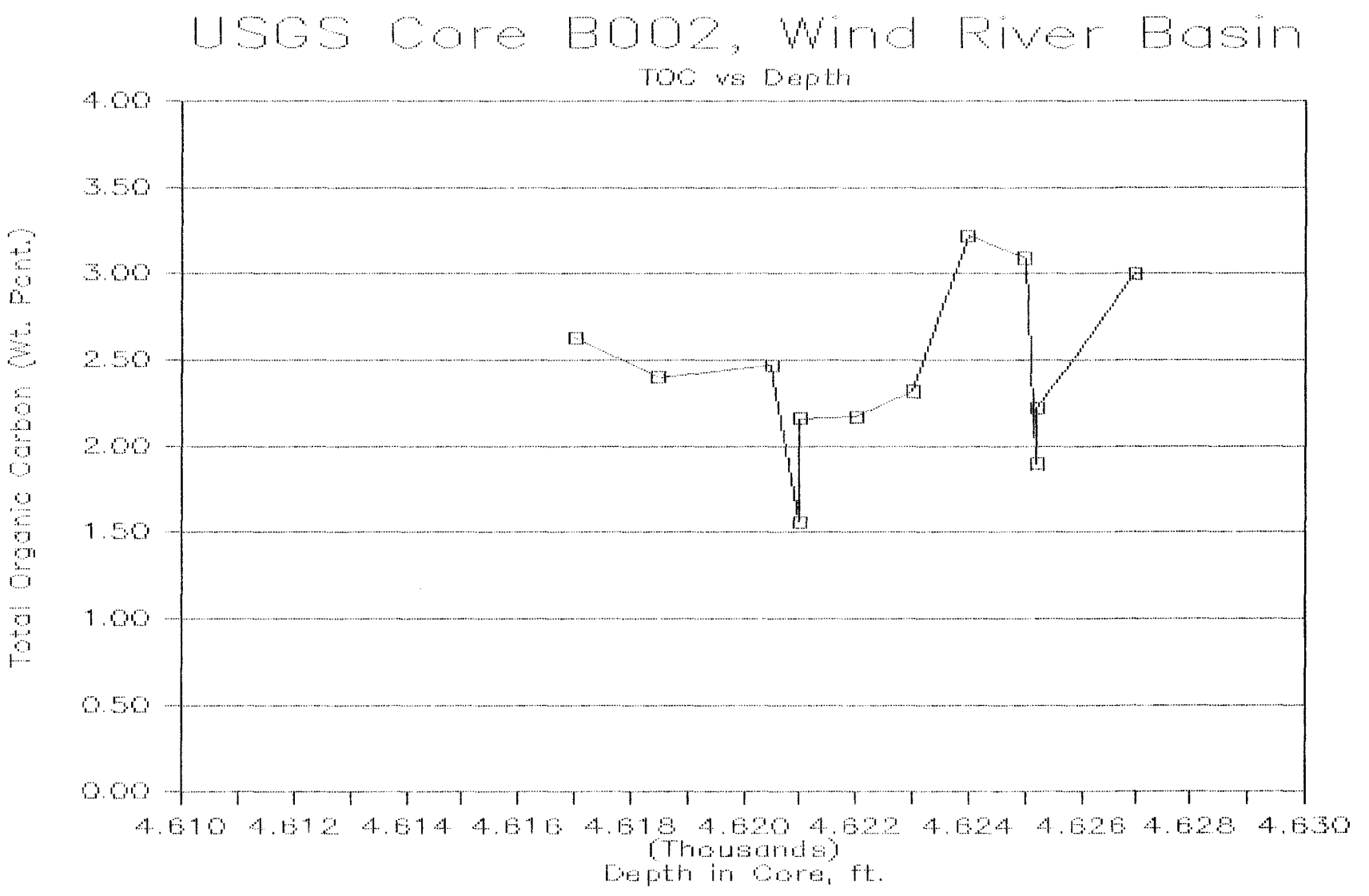
I will include this data in my presentation on P and C variations in the Mowry Shale at the AAPG Conference on "Chemostratigraphy and the Evolution of the Ocean - Atmosphere System", in early October, and possibly also in a talk on vertical and lateral proximality trends in the Mowry, at the GSA Annual Meeting in late October.

USGS Core B002, Wind River Basin, Mowry Shale Interval

| Sample No. | Depth ft. | Depth m. | PPM P (1) | PPM P (2) | AVG PPM P | PCNT ORG C |
|---|---|---|---|---|---|---|
| B002-1 | 4627.0 | 1410.31 | 598 | 586 | 592 | 3.00 |
| B002-2H | 4625.2 | 1409.76 | 905 | 886 | 896 | 2.22 |
| B002-2D | 4625.2 | 1409.76 | 2218 | 2130 | 2174 | 1.90 |
| B002-3 | 4625.0 | 1409.70 | 539 | 531 | 535 | 3.09 |
| B002-4 | 4624.0 | 1409.40 | 771 | 749 | 760 | 3.22 |
| B002-5 | 4623.0 | 1409.09 | 591 | 569 | 580 | 2.32 |
| B002-6 | 4622.0 | 1408.79 | 594 | 580 | 587 | 2.17 |
| B002-7H | 4621.0 | 1408.48 | 1982 | 1861 | 1922 | 2.16 |
| B002-7D | 4621.0 | 1408.48 | 1196 | 1171 | 1184 | 1.56 |
| B002-8 | 4620.5 | 1408.33 | 808 | 767 | 788 | 2.47 |
| B002-9 | 4618.5 | 1407.72 | 726 | 728 | 727 | 2.40 |
| B002-10 | 4617.0 | 1407.26 | 569 | 561 | 565 | 2.63 |
| (B)B002-11 | 4614.0 | 1406.35 | NA | NA | NA | NA |

# Core B002, Wind River Basin




USGS Core B002, Wind River Basin
TOC vs Depth
Total Organic Carbon (Wt. Pcnt.)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
4.610
4.612
4.614
4.616
4.618
4.620
4.622
4.624
4.626
4.628
4.630
(Thousands)
Depth in Core, ft.